REMARKS

Regarding the Specification

The proposed amendments to the Specification made in Applicants' response to Examiner's Office Action mailed January 11, 2005, have been canceled.

Regarding the Claims

Claims 1-4, 6, 10, 12, 13, and 17-25 are pending in the present application. Claims 1-4, 6, 10, 12, 13 and 17-25 stand rejected. Claims 1, 4, 6, 12-13, 17, 22 and 24 have been amended. Remaining non-canceled claims depend on an amended claim.

Claims 1 and 17 have been amended to recite that the metal esterification catalyst an organic or inorganic salt of, coordination complexes of or organometallic derivatives of bismuth, lead, tin, titanium, iron, antimony, uranium, cadmium, cobalt, thorium, aluminum, mercury, zinc, nickel, cerium, molybdenum, vanadium, copper, manganese, titanium, or zirconium. Support can be found at page 8, lines 23-28. Claim 4 has been amended to recite that the metal esterification catalyst comprises manganese acetate, antimony oxide, lead oxide, tin chloride, tin oxide, a titanate, or a combination thereof. Support can be found at page 8, lines 32-35 and in the Examples. Claims 6, 12 and 13 have been amended to depend on Claim 4 instead of Claim 1. Claims 22 and 24 have been amended to depend on Claim 21 instead of Claim 17.

Rejection of Claims 1-4, 6, 10, 12, 13, 17-20 and 22-25 under 35 U.S.C. 102(b) over Barda et al. (US 4,468,480), hereinafter "Barda"

Applicant agrees with Examiner that Barda discloses preparations of aromatic polyester polyol compositions having acid numbers of 0 to 10 mg KOH/g, that is, inclusive of having an acid number below 3.0 mg/KOH/g. Applicant further agrees with Examiner that Barda discloses preparations of

aromatic polyester polyol compositions prepared from species inclusive of non-alkoxylated aminoalcohols. At column 4, lines 27-39 in Barda, there is disclosed use of polyols containing at least three hydroxy groups, which includes triethanolamine at line 34.

However, Applicant respectfully disagrees that Barda discloses preparations of aromatic polyester polyol compositions prepared from metal esterification catalysts. Examiner asserts the metal materials disclosed in Barda at column 3, lines 48-60 read on "'metal esterification catalyst' as defined by the claims." Applicant respectfully disagrees that the metal materials in Barda are "metal esterification catalysts". First, Barda teaches adding "a basic material .. to neutralize any residual inorganic acid present" (see column 3, lines 48-51). Barda does not teach to add a catalyst. Barda states representative materials include alkali and alkaline earth metal compounds. Alkali metals are in group 1 of the Periodic Table, and include lithium, sodium, potassium, rubidium, cesium. Alkaline earth metals are in group 2 of the Periodic Table, and include magnesium, calcium, strontium, barium. None of these metals is mentioned in Applicant's specification as a metal esterification catalyst. Nonetheless, to further distinguish Applicants' invention from Barda, Applicants have amended independent claims 1 and 17 to specify those metals which are suitable as metal esterification catalysts.

It should be noted that the first mention in Barda of use of catalysts is in the preparation of polyurethane compositions at column 5, lines 35-49. Catalyst is mentioned at column 5, lines 44-45 along with optional blowing agent in the preparation of a polyurethane.

Rejection of Claims 21 and 1-4, 6, 10, 12, 13, 17-20 and 22-25 under 35 U.S.C. 103(a) over Barda et al. ("Barda") in view of Volkert et al. (US 6,331,577), hereinafter "Volkert"

Applicant agrees with Examiner that Volkert discloses use of esterification catalysts in the preparation of polyester polyols. However, Volkert fails to

disclose or suggest use of non-alkoxylated aminoalcohols in the preparation of polyester polyols. Volkert further fails to suggest use of an esterification catalyst has any effect or is critical to the formation of polyester polyols having an acid number below 3.0 mg/KOH/g.

The Examples of Volkert disclose use of commercial polyether polyols in the preparation of polyurethanes. The Examples fail to disclose preparation or use of polyester polyols.

Applicants draw Examiner's attention to Applicants' specification at page 2, line 34, bridging to page 3, line 17, where there is disclosed a discussion of use of non-alkoxylated aminoalcohols in aromatic polyester polyols (Zimmerman et al., U.S. Patent 4,442,237, hereafter, "Zimmerman"). Zimmerman discloses that when using a non-alkoxylated aminoalcohol, polyester polyols are prepared having acid numbers of 3 mg/KOH/g or higher. See also, Applicant's Example 1, page 18, based on Zimmerman, having an acid number of 5.1. A low acid number is preferred because the acid number reflects the number of free carboxylic acid groups in the polyol. Carboxylic acid groups do not react well with isocyanate and a polyurethane foam produced from polyols having high acid numbers are less dimensionally stable.

Zimmerman teaches addition of a non-alkoxylated aminoalcohol to a polyester polyol results in acid numbers of 3 mg/KOH/g or higher. There is no teaching or suggestion in Volkert that a metal esterification catalyst can lower acid numbers. Therefore, it is surprising that Applicants have found that an aromatic polyester polyol having an acid number of less than 3.0 mg/KOH/g can be produced by reacting an acid component, a glycol component a urethane catalytic activity agent that comprises a metal esterification catalyst as specified and a non-alkoxylated aminoalcohol.

In view of the foregoing, allowance of the above-referenced application is respectfully requested.

Respectfully submitted,

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